

What is claimed is:

1. A mechanical clutch assembly for selectively disengaging a motor from a cinching latch of a closure panel having a handle, said mechanical clutch assembly comprising:

5 a housing defining a longitudinal axis, an axial opening and a peripheral opening;

a shaft extending through said housing and out said axial opening along said longitudinal axis;

10 a driven gear rotatably secured to said shaft and axially positioned by said housing, said driven gear operatively connected to said motor and driven thereby;

a pinion gear secured to said shaft and selectively engagable with said driven gear; and

15 a clutch extending between said driven gear and said pinion gear allowing said pinion gear to disengage said driven gear allowing the motor to back drive when the handle and closure panel are operated manually.

2. A mechanical clutch assembly as set forth in claim 1 wherein said clutch includes a first set of clutch teeth fixedly secured to said driven gear.

3. A mechanical clutch assembly as set forth in claim 2 including a second set of clutch teeth fixedly secured to said pinion gear wherein said second set
20 of clutch teeth is selectively engagable by said first set clutch teeth of said driven gear when said driven gear is engaged with said pinion gear allowing the motor to operating the cinching latch.

4. A mechanical clutch assembly as set forth in claim 3 wherein said shaft includes a first shaft member and a second shaft member coaxial with said first shaft
25 member.

5. A mechanical clutch assembly as set forth in claim 4 wherein said first shaft member telescopes within said second shaft member.

6. A mechanical clutch assembly as set forth in claim 5 including a pinion spring extending between said housing and said pinion gear to bias said pinion gear

toward said driven gear to allow said second set of clutch teeth to engage said first set of clutch teeth.

7. A mechanical clutch assembly as set forth in claim 6 wherein said second shaft member includes a release end for receiving a releasing force to overcome said pinion spring to disengage said pinion gear from said driven gear.

8. A mechanical clutch assembly as set forth in claim 7 including a collar fixedly secured to said second shaft such that said collar extends out from said second shaft perpendicularly therefrom.

9. A mechanical clutch assembly as set forth in claim 8 wherein said collar extends between said driven gear and the cinching latch.

10. A mechanical clutch assembly for selectively disengaging a motor from a cinching latch of a closure panel having a handle, said mechanical clutch assembly comprising:

a housing defining a longitudinal axis, an axial opening and a peripheral opening;

a shaft extending through said housing and out said axial opening along said longitudinal axis, said shaft including a first shaft member, a second shaft member and a resilient member extending therebetween;

a driven gear rotatably secured to said shaft and axially positioned by said housing, said driven gear operatively connected to said motor and driven thereby;

a pinion gear secured to said shaft and selectively engagable with said driven gear; and

a clutch extending between said driven gear and said pinion gear allowing said pinion gear to disengage said driven gear allowing the motor to back drive when the handle and closure panel are operated manually.

11. A mechanical clutch assembly as set forth in claim 10 wherein said clutch includes a first set of clutch teeth fixedly secured to said driven gear.

12. A mechanical clutch assembly as set forth in claim 11 including a second set of clutch teeth fixedly secured to said pinion gear wherein said second set of clutch teeth is selectively engagable by said first set clutch teeth of said driven gear when said driven gear is engaged with said pinion gear allowing the motor to operate
5 the cinching latch.

13. A mechanical clutch assembly as set forth in claim 12 including a lever fixedly secured to said second shaft member to force said first and second shaft members axially with respect to said driven gear to disengage said pinion gear from said driven gear.

10 14. A mechanical clutch as set forth in claim 13 including a positioning spring extending between said housing and said first shaft member to align said first shaft member coaxially with said second shaft member in the absence of forces being applied to said lever.

15 15. A mechanical clutch assembly as set forth in claim 14 including a flexible collar securing said pinion gear along said first shaft member.

16. A mechanical clutch assembly as set forth in claim 15 including a pinion spring extending between said housing and said pinion gear to bias said pinion gear toward said driven gear to allow said second set of clutch teeth to engage said first set of clutch teeth.

20 17. A mechanical clutch assembly as set in claim 16 including a fastener fixedly securing said lever to said second shaft member.